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PATENT  
Attorney Docket No.: 023070-087130US  
Client Reference No.: 2000-468-2

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By: Karen Karlin

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

VREELAND, Valerie

Application No.: Not yet assigned

Filed: Herewith

For: RECOMBINANT MINIMAL  
CATALYTIC VANADIUM  
HALOPEROXIDASES AND THEIR  
USES

Examiner: Not yet assigned

Art Unit: Not yet assigned

**INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR §1.97 and  
§1.98**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. In accordance with 37 CFR §1.98(d), copies of the references can be found in Application No. 09/596,794, filed June 19, 2000 (Attorney Docket No. 023070-087110US). It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no

representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Chuan Gao  
Reg. No. 54,111

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				Application Number	
				Filing Date	Herewith
				First Named Inventor	Vreeland, Ph.D., Valerie
				Group Art Unit	
				Examiner Name	.
Sheet	1	of	3	Attorney Docket Number	02307O-087130US

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
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**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO		<b>Complete if Known</b>		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Application Number		
(use as many sheets as necessary)		Filing Date	Herewith	
Sheet	2	First Named Inventor	Vreeland, Ph.D., Valerie	
		Group Art Unit		
		Examiner Name		
		Attorney Docket Number		02307O-087130US

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C1	Hemrika et al.; <i>PNAS</i> (1997) No. 94, pp. 2145-2149		
	C2	Itoh et al.; <i>J. Biological Chemistry</i> (1986) No. 261, pp. 5194-5200		
	C3	Pfeifer, et al.; <i>J. Gen. Microbiol</i> (1992) No. 138, pp. 1123-1131		
	C4	Rush, et al.; <i>FEBS Letters</i> (1995) 359:244-246		
	C5	Sheffield et al.; <i>Phytochemistry</i> (1993) No. 32, pp. 21-26		
	C6	Shimonshi et al.; "Cloning and Expression of the Gene for a Vanadium-dependent Bromoperoxidase from a Marine Macro-alga, <i>Corallina pilulifera</i> " <i>FEBS Lett.</i> (1998) No. 428, pp. 105-110		
	C7	Simons et al.; <i>European Journal of Biochem</i> (1995) No. 229, pp. 566-574		
	C8	Soedjak, et al. "Inhibition and Inactivation of Vanadium Bromoperoxidase by the Substrate Hydrogen Peroxide and Further Mechanistic Studies" <i>Biochemistry</i> (October 1995) Vol. 34(39), pp. 12689-12696.		
	C9	Soedjak, et al. "Mechanism of Dioxygen Formation Catalyzed by Vanadium Bromoperoxidase From <i>Macrocystis pyrifera</i> and <i>Fucus distichus</i> : Steady State Kinetic Analysis and Comparison to the Mechanism of V-BrPO from <i>Ascophyllum nodosum</i> " <i>Biochim Biophys Acta</i> (August 1991) Vol. 1079(1), pp. 1-7.		
	C10	Soedjak, et al. "Characterization of Vanadium Bromoperoxidase from <i>Macrocystis</i> and <i>Fucus</i> : Reactivity of Vanadium Bromoperoxidase Toward Acyl and Alkyl Peroxides and Bromination of Amines" <i>Biochemistry</i> (August 1990) Vol. 29(34), pp. 7974-7981.		
	C11	van Pee, K.H.; <i>J. Bacteriol</i> (1988) No. 170, pp. 5890-5894		
	C12	Vreeland et al.; <i>Molecular Biology of the Cell</i> 7 (Supplement) 304a (1996)		

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>			Application Number		
Sheet	3	of	3	Filing Date	Herewith
				First Named Inventor	Vreeland, Ph.D., Valerie
				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	023070-087130US

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C13	Whitwam, R.E.; "Biophys. Research Communications." <i>Biochem</i> (1995) No. 216, pp. 1013-1017		
	C14	Wever R. et al. V. Vanadium haloperoxidases, Vanadium in Biological Systems, Physiology and Biochemistry, Chasten N.D. ed., Kulwer Academic Press, Dordrecht 1990, pp. 81-97		
	C15	Butler A. Mechanistic considerations of the vanadium haloperoxidases, coordination chemistry Reviews, 1999, 187, 17-35		
	C16	Colpas G.J. A functional model of vanadium haloperoxidases, <i>J. Am. Chem. Soc.</i> 1994, 116, 3627-3628		

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